

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF RHODE ISLAND

KAREN PETRO, as Administratrix of the
Estate of Mark Jackson

Plaintiff,

vs.

C.A. No. 09-213S

TOWN OF WEST WARWICK, ET AL

Defendants.

**DEFENDANTS' MEMORANDUM OF LAW IN SUPPORT OF THEIR OBJECTION TO
PLAINTIFF'S MOTION IN LIMINE TO EXCLUDE TESTIMONY BY DEFENDANTS'
EXPERTS DEBORAH MASH, CHARLES WETLI, AND GARY DIAS**

I. INTRODUCTION

Plaintiff's Motion *in Limine* seeks to exclude the testimony of Drs. Deborah Mash and Charles Wetli. Drs. Mash and Wetli are Defendants' experts on Excited-Delirium Syndrome (ExDS). Citing Daubert v. Merrill Dow Pharmaceuticals, Inc., Plaintiff contends that Dr. Mash is not qualified to offer an opinion at all and that Drs. Mash and Wetli's reasoning and methodology are not scientifically valid. 509 U.S. 579 (1993). The overarching implication of Plaintiff's argument is that ExDS is not a recognized medical condition.

Plaintiff's argument betrays a profound misunderstanding of this Circuit's Daubert jurisprudence. In applying Daubert, this Circuit has never required courts to track the inferences of experts to the point of scientific certainty. Nor would it be proper for this Court to disqualify Dr. Mash. Given the state of research on ExDS, Dr. Mash's qualifications are sufficient to allow her to comment on the presence of ExDS.

II. HISTORY OF DAUBERT JURISPRUDENCE

Plaintiff's reading of Daubert is, even in the most generous light, disingenuous. Plaintiff succeeds in construing Daubert in the rigid terms of its Motion *In Limine* by drawing authority from scattered District Court decisions from outside this Circuit. This approach is disingenuous in two ways: First, by drawing rules with casual ease from this and that District Court, Plaintiff fails to acknowledge the confusion the Daubert decision generated for courts put against the difficult task of admitting expert evidence. Secondly, by citing decisions outside of this Circuit, Plaintiff disregards the principles our own courts have laid down to manage the confusion.

Prior to Daubert, federal courts followed the Frye rule when it came to admitting scientific experts. Frye v. United States, 293 F. 1013, 1014 (D.C. Cir. 1923). Frye allowed expert opinion based on scientific technique to be admissible only if the technique was generally accepted as reliable "in the particular field in which it belongs." *Id.* In 1993, the Daubert Court recognized that the Frye rule was superseded by the adoption of the Federal Rules of Evidence. Daubert, 509 U.S. at 587. Specifically, Rule 702 states, "If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, [a qualified expert] may testify thereto." *Fed. R. Evid.* 702. But Daubert also requires the trial judge to "ensure that any and all scientific testimony or evidence admitted is not only relevant, but reliable." Daubert, 509 U.S. at 589.

But this reliability requirement presented a peculiar problem. How could scientific evidence be judged reliable in an evidentiary sense? *See id.* at 590, n.9. Science, the Court acknowledged, is not "an encyclopedic body of knowledge about the universe." *Id.* (quoting Brief for American Association for the Advancement of Science et al. as *Amici Curiae*, 7-8). Rather, science "represents a *process* for proposing and refining theoretical explanations about

the world that are subject to further testing and refinement.” *Id.* (quoting same). The Court’s solution to this problem was to obfuscate the difference between evidentiary reliability and scientific validity. “In a case involving scientific evidence, *evidentiary reliability* will be based upon *scientific validity*.” *Id.* And so, the Court suggested four ways by which trial courts could determine the validity of a scientific expert’s theory or technique; viz., (1) whether it can be (or has been) tested; (2) whether it has been subjected to peer review and publication; (3) what the known or potential rate of error is; and (4) what the particular degree of acceptance of the theory or technique is within the relevant scientific community. *Id.* at 593-94.

Chief Justice Rehnquist anticipated problems from the start. He and Justice Stevens took particular issue with the majority’s collapsing of the difference between evidentiary reliability and scientific validity. *See id.* at 599-600 (Rehnquist, C.J., dissenting). The Chief Justice was primarily concerned with the notion of federal judges evaluating the reliability of scientific offers of evidence in scientific terms. *Id.* at 600. “I do not doubt,” wrote the Chief Justice, “that *Rule 702* confides to the judge some gatekeeping responsibility in deciding questions of the admissibility of proffered expert testimony. But I do not think it imposes on them either the obligation or the authority to become amateur scientists in order to perform that role.” *Id.* at 600-01.

The Chief Justice’s comments turned out to be prescient. Eighteen years after *Daubert*, there is still no uniform rule for evaluating scientific evidence in federal courts. Some judges do not admit scientific evidence unless they are satisfied that the expert can show that his conclusions follow from demonstrable premises. *See, e.g., Best v. Lowe’s Home Ctrs., Inc.*, 563 F.3d 171, 177 (6th Cir. 2009) (criticizing district court’s exclusion of physician’s opinions because it disagreed with the physician’s extrapolation of the evidence, reliance on past

experiences, reliance on temporal proximity, failure to consider other causes, and subjectivity); *Rose v. Truck Ctrs., Inc.*, 338 Fed. Appx. 528, 535-36 (6th Cir. 2010) (“[T]he reliability inquiry focuses ‘solely on the principles and methodology, not on the conclusions they generate.’”).

Other courts are content with an expert’s conclusions so long as the analytical gap between the data and the expert’s conclusions is not too great. *See, e.g., Ruiz-Troche v. Pepsi Cola*, 161 F.3d 77, 81 (1st. Cir. 1998) (“[W]hile methodology remains the central focus of a *Daubert* inquiry, this focus need not completely pretermitt judicial consideration of an expert’s conclusions.”). All of which is to say that some Circuits evaluate the reliability of an expert’s testimony deductively; other Circuits would evaluate experts’ reliability inductively. The former, tracking the expert’s premises towards his conclusion, evaluate the soundness of the premises along the way and test the strength of the expert’s inferences. *See, e.g., Rose*, 338 Fed. Appx. at 535. The latter “evaluate the data offered to support an expert’s bottom-line opinions to determine if that data provides adequate support to mark the expert’s testimony as reliable.” *Ruiz-Troche*, 161 F.3d at 81.

In this Circuit, courts have approached *Daubert* inquiries inductively. That is, they do not focus “solely on principles and methodology” in evaluating the reliability of an expert’s opinions. *See id.* at 81 (citing and quoting *Daubert*, 509 U.S. at 595). Rather, they recognize that “conclusions and methodology are not entirely distinct from one another,” and the reliability of an expert’s opinion depends on whether there is “too great an analytical gap between the data and the opinion offered.” *Id.* (quoting *Gen. Elec. Co. v. Joiner*, 522 U.S. 136, 146 (1997)). Defendants submit that, in the case at bar, there is not a sufficient gap between the data offered and the conclusions drawn either to disqualify Dr. Mash as an expert or to exclude the methodology of either of Defendants’ experts.

III. DISCUSSION

In the case at bar, Plaintiff cherry-picks authority from various district courts outside this Circuit so as to create a rule rigid enough to exclude the testimony of Defendants' experts. But when considered by the *Daubert* jurisprudence in the First Circuit, Defendants' experts are suitably qualified to testify, and the methodology the Defendants experts employed is sound enough to satisfy *Daubert*'s reliability requirements.

A. Excited Delirium Is a Recognized Condition.

Plaintiff's experts attempt to cast doubt on whether ExDS is a recognized condition. These experts characterize ExDS as a "diagnosis of exclusion," propounded when no other cause of death can be determined. *See, e.g., Pl. 's Mot. Lim.* at 4, 5. To be sure, Dr. Brown is not even sure that ExDS "can be a valid cause of death." *Id.* at 5.

Defendants submit that ExDS is a recognized condition, even if it is not entirely understood. The condition is recognized by ACEP and the National Association of Medical Examiners. American College of Emergency Physicians (ACEP) *White Paper Report to the Council and Board of Directors*, September 10, 2009, attached as *Ex. A*. Several Federal District Courts have also recognized ExDS. *See, e.g., Mann v. Taser Int'l, Inc.*, 588 F.3d 1291, 1307 (11th Cir. 2009) (recognizing ExDS as a "serious medical need"); *Cruz v. City of Laramie*, 239 F.3d 1183, 1189 (10th Cir. 2001) (recognizing dangers created by placing pressure on the back of an arrested person in the prone position when that person is in a state of excited delirium); *Bowen-Soto v. City of Liberal*, C.A. No. 08-1171-MLB, 2010 U.S. Dist. LEXIS 118630, at *16 (D. Kan. Nov. 9, 2010) (recognizing that a suspect with ExDS has diminished capacity and cannot be subjected to hog-tying without constitutional violation) *Marquez v. City of Phoenix*,

CV-08-1132-PHX-NVW, 2010 U.S. Dist. LEXIS 88545, at *14 (D. Ariz. Aug. 25, 2010) (relying on autopsy report that subject “had died from ‘excited delirium,’ which was the product of ‘adrenaline toxicity’”); Lee v. City of Nashville and Davidson Cty., Civil No. 3:06-0108, 2009 U.S. Dist LEXIS 69825, at *38 (M.D. Tenn. Aug. 10, 2009) (allowing State of Tennessee M.E. to testify that ExDS caused subject’s death). Therefore, the notion that ExDS is, somehow, “junk science” is untenable.

B. Dr. Mash is Qualified to Offer Expert Opinions in This Case.

Plaintiff seeks to disqualify Dr. Mash from testifying as an expert on two grounds. First, Plaintiff argues that Dr. Mash’s opinions amount to a diagnosis of Mr. Jackson’s condition and that, because Dr. Mash is a Ph.D. rather than an M.D., she is not qualified to offer her opinion. See Conde v. Velsicol Chem. Corp., 24 F.3d 809, 813 (6th Cir. 1994); Plourde v. Gladstone, 190 F. Supp. 2d 708, 719 (D. Vt. 2002). Secondly, Plaintiff argues that Dr. Mash’s expertise in pharmacology, toxicology, and post-mortem analysis of brain tissue does not qualify her to give opinions in this case because “Mr. Jackson was not on drugs and no post-mortem analysis of brain tissue is available.” *Pl.’s Mot. Lim.* at 11. Each of these arguments misses the point.

Plaintiff’s first argument is a textbook example of the straw-man fallacy. Plaintiff characterizes Dr. Mash’s comments as a “diagnosis.” *Id.* at 5. Plaintiff then cites cases from various Circuits that state that only a medical doctor can make a diagnosis. *Id.* at 5. Having laid this groundwork, Plaintiff has only to point out that Dr. Mash is not a medical doctor and so cannot make a diagnosis.

Plaintiff’s characterization of the matter here is too simplistic. Dr. Mash is more than qualified to testify as an expert regarding ExDS. First, the condition that Plaintiff argues Dr.

Mash purports to “diagnose” is a syndrome. *See* ACEP, *White Paper*. A “syndrome” is “a group of signs or symptoms that occur together and characterize a particular abnormality.” *Merriam Webster’s Medical Dictionary* (1995). A syndrome “constitute[es] a picture of the disease.” *Stedman’s Medical Dictionary*, 28th ed. (2006). A syndrome can be recognized – just as any “picture” or “characterization” may be recognized – even though there is no definitive diagnostic “test” for it. ACEP *White Paper* (comparing ExDS with the similarly mysterious Sudden Infant Death Syndrome).

ExDS is a syndrome insofar as it can be identified by a cluster of associated symptoms. *Id.* Indeed, ACEP recognizes ExDS as a syndrome rather than a unique disease because of the difficulty surrounding clinical identification of its presence. *Id.* ACEP has identified ten potential clinical features of excited delirium syndrome: pain tolerance, tachypnea (rapid breathing), sweating, agitation, tactile hyperthermia, police noncompliance, lack of tiring, unusual strength, inappropriately clothed, mirror or glass attraction. *Id.* While the fundamental manifestation of the syndrome is delirium, there are several potential underlying associations or causes; viz., stimulant drug abuse, psychiatric disease, psychiatric drug withdrawal, and metabolic disorders. *Id.* Even so, there is no definitive, diagnostic “test” for Excited Delirium Syndrome. Rather, it “must be identified by its clinical features.” *Id.*

All of which is to say that it is beside the point that Dr. Mash is not a medical doctor. *See Pl.’s Mot. in Limine* at 11 (citing *Conde v. Velsicol Chem. Co.*, 24 F.3d 809, 813 (6th Cir. 1994)). Even a medical doctor cannot make a definitive diagnosis of ExDS, for there is no definitive diagnostic test for it. Rather, the syndrome “may be identified by the presence of a distinctive group of clinical and behavioral characteristics that can be recognized in the pre-mortem state.”

ACEP *White Paper*. With this understanding of the syndrome, Dr. Mash, having studied the syndrome extensively, is qualified to offer her opinion.

Plaintiff's second argument fails to recognize the particular relevance of Dr. Mash's work to the medical community's broader understanding of ExDS. Defendants acknowledge that much of Dr. Mash's work has to do with cases involving cocaine intoxication and are willing to assume for the purpose of argument that Mr. Jackson was not on drugs. But much of what is known about ExDS comes from analyses of patients whose ExDS episodes are associated with cocaine use. To be sure, these analyses have been instructive. Postmortem brain examinations of such patients show certain evidence of brain abnormalities, such as "a characteristic loss of the dopamine transporter in the striatum of chronic cocaine abusers who die in police custody from apparent ExDS." *Id.* This seminal observation has led the ACEP to recognize that "one potential pathway for the development of ExDS is excessive dopamine stimulation in the striatum." *Id.* While the significance of these findings is unknown in the context of excited delirium episodes unrelated to chronic cocaine abuse, these studies nevertheless help to explain the presence of hyperthermia in ExDS subjects, for hypothalamic dopamine receptors are responsible for thermoregulation. *Id.* Disturbances of dopamine neurotransmissions, such as those brought on by chronic drug use, may therefore help explain the hyperthermia found in many ExDS patients whose episodes are not associated with drug use. *Id.* It is expected at the hearing that Dr. Mash will testify that these disturbances are also associated with neuropsychiatric disorders and that the same pattern of biomarker abnormality is shown in these subjects at brain autopsy. Collectively, these studies demonstrate that sudden unexplained death in custody is frequently associated with either the abuse of stimulants or a preexisting psychiatric condition.

Dr. Mash is a Professor of Neurology and Molecular and Cellular Pharmacology at the University of Miami. She has received peer-reviewed National Institute on Health PHS funding for studies of ExDS for almost two decades. *PHS Grant DA06227, Deborah C. Mash, Ph.D., Principal Investigator.* She is also the Director of the University of Miami Brain Endowment Bank, which boasts of the largest collection of autopsy specimens from excited delirium and sudden death. And she is the author of various studies on the effects of drug use and disease on the chemistry of the brain. Of particular relevance to this point, she is the author of *Biomarkers for Identifying Excited Delirium as a Cause of Sudden Death*, *Forensic Sci Int*, 190(1-3):e13-9, 2009 and *Cocaine Abuse Elevates Alpha-Synuclein and Dopamine Transporter Levels in the Human Striatum*, *Neuroreport* 16(13): 1489-93, 2005. Dr. Mash works with medical examiners in the United States, Canada, and Europe, providing consult services for cases of in-custody death. She is a co-author with Drs. Stephens, Jentzen, Karch, and Wetli on the National Association of Medical Examiners' (NAME) position paper on the certification of cocaine-related deaths, which describes ExDS. *25 Journal of Forensic Medicine and Pathology* 1, 11-13 (2004). Dr. Mash's area of expertise is, therefore, focused upon the very issues that the ACEP and the NAME identifies as the most promising avenues of inquiry into the causes of Excited Delirium Syndrome. *See ACEP White Paper.*

C. The Methodologies of Drs. Mash and Wetli are Sufficiently Sound Under This Circuit's Daubert Jurisprudence.

Plaintiff also seeks to exclude the testimony of Drs. Mash and Wetli on the ground that their methodologies are not sound. *Pl. 's Mot. Lim.* at 11-12. Drs. Mash and Wetli, Plaintiff's argument goes, failed to make a valid differential diagnosis of Mr. Jackson's cause of death.

According to Plaintiff, a differential diagnosis is reliable and admissible when: (1) the physician objectively ascertains the nature (to the extent possible) of the injury; (2) the physician rules in one or more causes using valid methodology; and (3) the physician rules out alternative causes to reach the cause most likely. *See id.* at 12 (citing Best, 563 F.3d at 179). Plaintiff argues that, because Mash and Wetli offer no explanation about why Mr. Jackson's cardiac abnormalities and his altercation with the police were alone not sufficient to cause his death, they have not satisfactorily "ruled out" alternative causes of his death. Because they have not ruled out these possible alternative causes of Mr. Jackson's death, the argument goes, they have not succeeded in making a differential diagnosis.

Plaintiff again misses the point. First, Plaintiff's argument fails to understand the manner in which District Courts in this Circuit apply the Daubert standard. Secondly, Plaintiff's appeal to differential diagnosis in this motion seeks to remove a critical question of fact from the jury.

1. Daubert does not require judges to become amateur scientists.

As noted above, Daubert has generated confusion among courts. Some courts have taken Justice Blackmun's commentary on scientific reliability to heart and rigidly track the grounds upon which scientific experts form their opinions. These courts trace the experts' inferences and evaluate whether both grounds and inferences are cogent enough for the expert to draw the opinion that he draws. Other courts assess the reliability of an expert's methodology by looking at the expert's premises and conclusions and then assessing whether the conclusions follow well from the known data.

This Court must assess the methodology of Drs. Mash and Wetli in a way that is consistent with this Circuit's Daubert jurisprudence. That assessment ought to take the form of

an analysis of these experts' conclusions in light of their premises rather than a examination of the inferences they draw from their premises with no eye whatsoever to their conclusions. *See Ruiz-Troche*, 161 F. 3d at 81; compare *Rose v. Truck Ctrs., Inc.*, 388 Fed. Appx. at 535 (“[T]he reliability inquiry focuses ‘solely on the principles and methodology, not on the conclusions they generate.’”). The question before this Court, in other words, is whether there is a significant analytical gap between these experts' opinions and the available data. *See Ruiz-Troche*, 161 F.3d at 81 (holding that while “conclusions and methodology are not entirely distinct from one another,” “[a] court may conclude that there is simply too great an analytical gap between the data and the opinion offered”) (quoting and citing *Joiner*, 522 U.S. at 146).

Dr. Mash posits that Mr. Jackson's behavior was consistent with an acute onset of excited delirium. *Opinion of Dr. Deborah Mash* at 5. She notes that Mr. Jackson “demonstrated paranoid, violent, and aggressive behaviors that were unrelenting,” “was impervious to pain control measures and . . . failed to respond to verbal commands,” and “demonstrated extreme strength requiring the assistance of five Officers at the scene.” *Id.* at 5. These behaviors and symptoms are consistent with the cluster of symptoms that ACEP identifies as indicating the presence of Excited Delirium Syndrome.

Dr. Mash further states that Mr. Jackson was at risk for excited delirium because he was an unmedicated schizophrenic. *See id.* at 7. Many who experience ExDS are also chronic abusers of stimulants such as cocaine and suffer from dopamine abnormalities in the striatum. *ACEP White Paper*. Schizophrenia similarly features abnormal dopamine and dopamine receptors. *See Opinion of Dr. Deborah Mash* at 7. Left untreated, schizophrenia conceivably poses harm to the brain similar to that of chronic drug use. *See id.* at 7; *ACEP White Paper*. It therefore stands to reason that the harm caused by untreated schizophrenia may manifest

ultimately manifest as ExDS, just as the harm caused by chronic cocaine use may. Dr. Mash's opinion that Mr. Jackson suffered from an excited delirium episode at the time of his death is therefore sufficiently supported by known data to satisfy Daubert as that standard is applied in this Circuit; which is to say, there are no significant analytical gaps between her conclusions and the known data. See Ruiz-Troche, 161 F.3d at 81.

Dr. Wetli's conclusions also pass muster under Daubert jurisprudence in this Circuit. Dr. Wetli concludes that Mr. Jackson had many of the characteristics of excited delirium. These included: "violent and aggressive behavior, a marked apparent increase in strength, no response to pain compliance techniques . . . , unintelligible and inappropriate verbalization, and sudden loss of vital signs shortly after cessation of the struggle." *Opinion of Charles v. Wetli, M.D.* These symptoms are consistent with symptoms that are generally recognized as belonging to the cluster of symptoms that characterizes the syndrome. See ACEP *White Paper*. Dr. Wetli's conclusions follow easily from the known data and do not leave any analytical gaps. Therefore, he should not be excluded from offering his opinion.

2. Defendant should not bear the burden of disproving Plaintiff's case in a Daubert hearing any more than at trial.

Defendants submit that Plaintiff's prayer to this Court to hold Defendants' experts exclusively to the methodology of differential diagnosis is inappropriate. Plaintiff argues that Drs. Mash and Wetli's opinions may not be admitted because they fail to show why ExDS alone, rather than his struggle with the police or "several cardiac anomalies," caused Mr. Jackson's death. *Pl. 's Mot. Lim.* at 12. Plaintiff would have it that Defendants bear the burden, in

qualifying their experts, to disprove Plaintiff's theory of the case, viz., that the struggle with the police caused Mr. Jackson's death. But this is wholly inappropriate.

Plaintiff has the burden to prove by a preponderance of evidence that Defendants' conduct resulted in the loss of Plaintiff's life. *Velez-Rivera v. Agosto-Alicia*, 437 F.3d 145, 151-52 (1st Cir. 2006) ("In order to establish liability under § 1983, plaintiffs "must show by a preponderance of evidence that: (1) the challenged conduct was attributable to a person acting under color of state law; and (2) the conduct deprived the plaintiff of rights secured by the Constitution or laws of the United States."). Defendants need only show that their experts are qualified and that the methodology they employ is reliable. Defendants do not bear the burden of proving that the expert's opinions are unassailable by disproving Plaintiff's theory of the case. *United States v. Mooney*, 315 F. 3d 54, 63 (1st Cir. 2002) (*Daubert* does not demand "unassailable expert testimony."). While Defendants do not question Plaintiff's right to challenge Defendants' experts in a *Daubert* hearing, Defendants submit that *Daubert* does not require Defendants to disprove Plaintiff's case at that hearing. See *United States v. Mooney*, 315 F.3d 54, 63 (1st Cir. 2002) ("[A]ny flaws in [an expert's] opinion may be exposed through cross-examination or competing expert testimony.").

IV. GARY DIAS'S TESTIMONY

Plaintiff's Motion in Limine also seeks to exclude Gary Dias as an expert. Plaintiff's ground for exclusion is that Mr. Dias's testimony, that police officers have no duty to render CPR to an injured or ill person, addresses a question of law. Defendants agree that this is a legal question and will address the particulars of why police officers have no such duty in a separate brief.

V. CONCLUSION

For the reasons herein and other that may be presented at hearing, Defendants respectfully ask this Court to deny Plaintiff's Motion in Limine as far as it seeks to exclude the testimony of Drs. Mash and Wetli.

Defendants,
By their Attorney

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CERTIFICATION OF SERVICE

I hereby certify that the within document has been electronically filed with the Court on March 2, 2011 and is available for viewing and downloading from the ECF system.

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